



PATENT APPLICATION
Serial No. 10/511,826
Atty. Docket No.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Art Unit 1713 :

In re application of :

THERMOPLASTIC RESIN COMPOSITION,
POLYMER COMPOSITION, AND MOLDED
OBJECT

Hiroshi UEHARA :

Serial No. 10/511,826 :

Filed October 20, 2004 :

Examiner Ling-Sui Choi :

DECLARATION UNDER 37 CFR § 1.132

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

I, Hiroshi UEHARA, hereby declare as follows:

That I have graduated from Polymer Chemistry course of graduate school in Tokyo Institute of Technology in March of 1999, and been employed in Mitsui Chemicals, Inc. in April of 1999, and assigned to Functional Polymeric Materials Laboratory and concerned with a development of polyolefin elastomer since 2000.

That I am one of the named inventors of the invention described and claimed in the above-identified patent application.

That I have read and am familiar with the above-identified patent application and the references cited by the Examiner, i.e., U.S. Patent No. 6,214,924 B1 to Bieser et al, U.S. Patent No. 6,232,377 B1 to Hayashi et al. and JP 09-221567 to Kensho et al.

That I carried out the following Experiment to be able to fully understand the present invention by the Examiner and believe it to be valuable.

REPORT OF EXPERIMENT

Additional Comparative Example

A thermoplastic resin composition was prepared in the same manner as in Example Y1-1 except the use of a commercially available ethylene/octene copolymer (Density: 885 kg/m³, Melt Flow Rate at 190°C under a load of 2.16 kg: 1.1, Trade Name: EG8003 manufactured by Dow Chemical Company) instead of a-2 in Example Y1-1 as (A-1) component and except the use of the same ethylene/octene copolymer instead of a-1 in Example Y1-1 as an unmodified copolymer as material of modified polymer (C) and the materials were blended in the amounts (wt%) as shown in Table below.

The unmodified copolymers used in Examples Y1-1 and Y-2 are an ethylene/1-butene copolymer a-1 prepared by Production Example 2.

Physical properties of the obtained thermoplastic resin composition was evaluated in the same manner as in Example Y1-1 and the results are set forth in Table below compared with those in Examples Y1-1 and Y2.

			Example Y1-1	Example Y2	Additional Comparative Example
(A-1) Ethylene/ α -olefin copolymer	Type	-	a-2	a-2	ethylene/octene copolymer
Unmodified copolymer as material of modified polymer (C)	Type	-	a-1	a-1	ethylene/octene copolymer
	Content of 1-butene	mol%	12	12	
	Intrinsic viscosity	dl/g	1.5	1.5	
	Glass transition temperature	$^{\circ}\text{C}$	-50	-50	
	Degree of crystallization	%	10	10	
	B value	-	1.5	1.5	
	Density	kg/m ³	885	885	885
Unmodified PE as material of modified polymer (C)	Density	kg/m ³	-	-	-
(C) Modified polymer	Amount of charged MAH (unmodified copolymer: 100 wt)	wt%	0.5	0.5	0.5
	Amount of graft MAH	wt%	0.43	0.43	0.44
Composition	A-1	wt%	36	36	36
	(B) Magnesium hydroxide	wt%	60	60	60
	Silicone resin	wt%	3	3	3
	(C) Modified polymer	wt%	1	3	3
Physical properties of composition	Break strength	MPa	9	10	10
	Elongation at break	% (between gages)	700	630	440
	Torsional rigidity	MPa	30	36	44
	Scratch resistance	○, △, x	○	○	○
	Whitening on bending	○, x	○	○	○

That the undersigned declares further that all statements made herein of his own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patents issuing thereon.

Date November 6, 2006 Inventor

H. Uhm

[Name of Inventor]